

ABSTRACT

**METHOD AND SYSTEM OF TRACKING MISSING PACKETS IN A
MULTICAST TFTP ENVIRONMENT**

5 A method, system, and program product for efficiently tracking lost data packets
in a multicast TFTP network environment. An algorithm is encoded within the receiving
client processing system that tracks received packets within a 64Kbit tracking array. The
array is stored in memory. If the number of packets of a file being transmitted is larger
than 64K, the algorithm performs a grouping function, by which each set of two
10 neighboring spaces within the array are combined. Combining of the spaces involves
ANDing the spaces together, and the ANDed results stored within a single space
indicates whether or not the packets within the group needs to be re-requested. Thus if
either one of the values in the spaces is a zero (indicating that the corresponding packet
is lost) then the combined space is tagged with a zero. In this way, when the client is
15 determining which packet(s) or groups to re-request, the client checks the array for holes
(i.e., 0's) and re-requests the packet(s) represented by each hole found.